

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1 1.-10. (Canceled)

1 11. (Currently amended) A rapid diagnostic test system, comprising:

2 a single-use module including, ~~comprising~~:

3 a medium containing a labeling substance that comprises first persistent
4 fluorescent structures that emit light having a first frequency and second persistent
5 fluorescent structures that emit light having a second frequency, wherein each of the
6 first persistent fluorescent structures is attached to a substance capable of binding the
7 first persistent fluorescent structure to a target analyte when a sample containing the
8 target analyte is applied to the medium;

9 a light source positioned to illuminate a target area and a control area on the
10 medium;

11 a first photodetector positioned to measure light of the first frequency
12 originating from the target area of the medium;

13 a second photodetector positioned to measure light of the second frequency
14 originating from the control area, wherein a signal from the second photodetector
15 indicating an intensity above a threshold level indicates that the sample has passed
16 through the target area; and

17 a terminal located on an external surface of the single-use module for
18 conductively receiving electrical power from a source external to the single-use
19 module for the light source, the first photodetector, and the second photodetector, the
20 terminal comprising conductors along the external surface of the single-use module,
21 the terminal of the single use module configured to be inserted into a receptacle of a
22 reusable module for; and a reusable module having a receptacle into which the
23 external terminal of the single-use module can be inserted for providing the electrical
24 power from the reusable module to the single-use module and communicating test
25 result signals between the single-use module and the reusable module.

1 12. (Previously presented) The system of claim 11, wherein the
2 reusable module implements a user interface capable of indicating a test result.

1 13. - 20. (Canceled)

1 21. (Previously presented) The system of claim 12, wherein the user
2 interface comprises a display for the test result.

1 22. (Previously presented) The system of claim 11, wherein the test
2 signals are electrical test signals.

1 23. (Previously presented) The system of claim 11, wherein the first
2 and the second persistent fluorescent structures comprise quantum dots.

1 24. (Canceled)

1 25. (Canceled)

1 26. (Previously presented) The system of claim 11, wherein the medium
2 comprises a lateral-flow strip for performing a binding assay, and the target area
3 contains an immobilized substance that binds to and holds a complex including one of
4 the first persistent fluorescent structures and the target analyte.

1 27. - 38. (Canceled)

1 39. (Previously presented) The system of claim 26, wherein the second
2 persistent fluorescent structures bind to the control area.

1 40. (Previously presented) The system of claim 11, further comprising:
2 a first color filter that transmit light of the first frequency to the first
3 photodetector and blocks other frequencies; and
4 a second color filter that transmit light of the second frequency to the second
5 photodetector and blocks other frequencies.

1 41. (Previously presented) The system of claim 11, wherein the control
2 area contains an immobilized substance that binds and retains to the labeling
3 substance.